What is claimed is:

1. A process for forming an article, comprising the steps of:

providing a substrate, and

forming on the substrate a film of $(BiEu)_3(Fe_{5-y}(Ga_xAl_{1-x})_y)O_{12}$, where x is 0 to 1 and y is 0.8 to 1.2,

wherein the substrate is a single crystal material consisting essentially of a solid solution of two or more garnet materials, the substrate having a lattice parameter within 0.004 Angstrom of the lattice parameter of the $(BiEu)_3(Fe_{5-y}(Ga_xAl_{1-x})_y)O_{12}$.

2. The process of claim 1, wherein x is 1, and the substrate lattice parameter is 12.53 to 12.555 Angstroms.

3. The process of claim 1, wherein the substrate is of substantially uniform composition.

4. The process of claim 1, wherein the substrate consists essentially of a solid solution of gadolinium scandium gallium garnet and gadolinium scandium aluminum garnet, or a solid solution of gadolinium scandium gallium garnet and terbium scandium gallium garnet.

5. The process of claim 1, wherein y is selected such that the film exhibits a saturation magnetization, in absolute value, less than 100G at least at room temperature.

6. The process of claim 5, wherein the film exhibits a substantially rectangular magnetization loop, a saturation magnetization, in absolute value, less than 100G, a switching field, in absolute value, higher than the saturation magnetization, in a magnetic field applied parallel to the normal to the major surface of the film, over an operating temperature range of –40°C to +85°C.

7. The process of claim 6, wherein the film exhibits a switching field, in absolute value, of at least 200 Oe over the operating temperature range, and a switching field, in absolute value, of at least 500 Oe at least at room temperature.

8. The process of claim 7, wherein the film exhibits a switching field, in absolute value, of 500 Oe or higher over the operating temperature range.

9. The process of claim 1, further comprising the steps of:

processing the film to form chips, and

incorporating at least one chip into a device.

10. The process of claim 1, wherein the lattice parameter is within 0.002 Angstrom of the lattice parameter of the $(BiEu)_3(Fe_{5-y}(Ga_xAl_{1-x})_y)O_{12}$.

11. A process for forming an article, comprising the steps of:

providing a substrate, and

forming on the substrate a film of $(BiEu)_3(Fe_{5-y}(Ga_xAl_{1-x})_y)O_{12}$, where x is 0 to 1 and y is 0.8 to 1.2,

wherein the substrate is a single crystal material consisting essentially of a solid solution of gadolinium scandium gallium garnet and gadolinium scandium aluminum garnet, or a solid solution of gadolinium scandium gallium garnet and terbium scandium gallium garnet.

12. The process of claim 11, where x is 1.

13. The process of claim 12, wherein the substrate lattice parameter if 12.53 to 12.555 Angstroms.

14. The process of claim 13, wherein the substrate is of substantially uniform composition.

15. The process of claim 11, wherein y is selected such that the film exhibits a saturation magnetization, in absolute value, less than 100G at least at room temperature.

16. The process of claim 15, wherein the film exhibits a substantially rectangular magnetization loop, a saturation magnetization, in absolute value, less than 100G, a switching field, in absolute value, higher than the saturation magnetization, in a magnetic field applied parallel to the normal to the major surface of the film, over an operating temperature range of –40°C to +85°C.

17. The process of claim 13, wherein the film exhibits a switching field, in absolute value, of at least 200 Oe over the operating temperature range, and a switching field, in absolute value, of at least 500 Oe at least at room temperature.

18. The process of claim 17, wherein the film exhibits a switching field, in absolute value, of 500 Oe or higher over the operating temperature range.

19. The process of claim 11, further comprising the steps of:
processing the film to form chips, and
incorporating at least one chip into a device.

20. An article comprising the film according to claim 1.

21. An article comprising the film according to claim 4.